

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: DRAFT – June 30, 2017

Region: Asheville Regional Office
County: Caldwell
NC Facility ID: 1400007
Inspector's Name: Patrick Ballard
Date of Last Inspection: 05/24/2016
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): Bernhardt Furniture Company</p> <p>Facility Address: <u>Site Name:</u> Bernhardt Furniture Company – Plants 3 & 7 1502 Morganton Boulevard (Plant 3) 1402 Morganton Boulevard (Plant 7) Lenoir, NC 28645</p> <p>Mailing Address: P. O. Box 740 Lenoir, NC 28645</p> <p>SIC: 2511 / Wood Household Furniture NAICS: 337122 / Nonupholstered Wood Household Furniture Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 15A NCAC 2Q .0513 NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other:</p> <p style="text-align: center;">RENEWAL ONLY – NO MODIFICATIONS</p>
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Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	
Eddie Pitts Corporate Environmental Manager (828) 759-6348 1839 Morganton Blvd Lenoir, NC 28645	Peter (Pete) Craymer Chief Financial Officer and Senior VP (828) 759-6538 1839 Morganton Boulevard Lenoir, NC 28645	Eddie Pitts Corporate Environmental Manager (828) 759-6348 1839 Morganton Blvd Lenoir, NC 28645	Application Number: 1400007.16B Date Received: 08/18/2016 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 02000/T31 Existing Permit Issue Date: 05/9/2017 Existing Permit Expiration Date: 08/31/2017

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2015	0.4600	9.22	97.32	11.28	7.12	7.14	4.67 [Toluene]
2014	0.5400	10.39	94.62	12.72	9.71	7.23	4.93 [Toluene]
2013	0.3800	7.26	92.65	8.88	8.08	7.92	5.40 [Toluene]
2012	0.3200	6.33	81.59	7.75	7.23	6.77	4.43 [Toluene]
2011	0.1500	2.84	96.44	3.48	5.52	7.79	5.19 [Toluene]

<p>Review Engineer: Judy Lee</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue: 02000/T32 Permit Issue Date: August XX, 2017 Permit Expiration Date: July 31, 2022</p>
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1. Purpose of Application

Bernhardt Furniture Company – Plants 3 & 7 (Bernhardt) currently operates under Air Quality Title V Permit No. 02000T31 issued on May 9, 2017, for a furniture manufacturing facility in Lenoir, Caldwell County, North Carolina.

Bernhardt submitted a renewal request received by the Division of Air Quality – Raleigh Central Office (DAQ-RCO) on August 18, 2016 (Application No. 1400007.16B) for Air Quality Permit No. 02000T30, which is currently in house and was received at least nine months prior to the expiration date. Therefore, per 15A NCAC 02Q .0513, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

15A NCAC 02Q .0512 PERMIT SHIELD AND APPLICATION SHIELD

(a) Permit Shield:

...

(5) A permit shield shall not extend to minor permit modifications made under Rule .0515 of this Section.

(b) Application Shield.

(1) Except as provided in Subparagraph (b)(2) of this Rule, if the applicant submits a timely and complete application for permit issuance (including for renewal), the facility's failure to have a permit under this Section shall not be a violation:

(A) unless the delay in final action is due to the failure of the applicant's timely submission of information as required or requested by the Director, or

(B) until the Director takes final action on the permit application.

(2) Subparagraph (b)(1) of this Rule shall cease to apply if, subsequent to the completeness determination made under Rule .0507 of this Section, the applicant fails to submit by the deadline specified in writing by the Director, any additional information identified as being needed to process the application.

15A NCAC 02Q .0513 PERMIT RENEWAL AND EXPIRATION

(a) Permits being renewed ...

(b) Permit expiration terminates the facility's right to operate unless a complete renewal application has been submitted at least nine months before the date of permit expiration.

(c) If the permittee or applicant has complied with Rule .0512(b)(1) of this Section, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

This renewal follows a significant Title V modification application request of Bernhardt's Air Permit No. 02000T30 to add an Oxygen (O₂) sensor in each stack and automated controls that use this O₂ reading to reduce the over and under fire air insertion automatically for two of their four existing wood-fired boilers (**ID Nos. ES-320 and ES-321**) which was processed and Air Permit No. 02000T31 was signed on May 9, 2017.

2. Facility Description

The facility is a wood furniture manufacturing complex consisting of two Plants (3 & 7). Plant 3 manufactures office furniture such as desks and shelves, and Plant 7 manufactures office chairs. Operations at Plants 3 and 7 include wood furniture finishing, boilers with associated control devices, and wood drying kilns. The complex has added a steam line from Plant 3 to Plant 7 such that the boilers from Plant 3 serve Plant 7. The Plant 7 boilers are rarely used.¹

➤ Facility name/address/legal name/responsible official check:

- ✓ **IBEAM** compared with Renewal application submittal
- ✓ NC Department of the Secretary of State Corporation search: <https://www.sosnc.gov/> compared with **IBEAM** (See Attachment 1)

3. History/Background/Application Chronology

Please see the attached Comprehensive Application Report for Application No. 1400007.16B, as well as email correspondence for more details.

August 18, 2016 – Current application submitted.

July XX, 2017 – Public Notification

4. Permit Modifications/Changes and TVEE Discussion

The following table describes the modifications to the current permit as part of this renewal process:

*****INSERT TABLE FROM PERMIT*****

- ✓ TVEE was updated accordingly, see pink sheet for approval.

5. New Equipment/Change in Emissions and Regulatory Review:

Proposed Equipment Changes

<u>Equipment to be ADDED:</u>	<i>none</i>
<u>Equipment to be MODIFIED:</u>	<i>none</i>
<u>Equipment to be REMOVED:</u>	<i>none</i>

Facility Emissions Review

Total Facility-wide emissions – see Table above.

¹ Review for issued Air Quality Permit No. 02000T31 and most recent inspection report dated May 24, 2016.

Regulatory Review

In addition to requirements provided in Section 3 – General Conditions, this facility is currently subject to the following regulations:

15A NCAC 2D .0504, Particulates from Wood Burning Indirect Heat Exchangers
15A NCAC 2D .0512, Particulates from Miscellaneous Wood Products Finishing Plants
15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes
15A NCAC 2D .0516, Sulfur Dioxide from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .1111, Maximum Achievable Control Technology MACT (Subpart JJ & DDDD) and Generally Achievable Control Technology GACT (Subpart JJJJJ)
15A NCAC 2Q .0317 Avoidance Conditions – Limitation to Avoid being Major for Hazardous Air Pollutants (HAP)

An extensive review of each applicable regulation above will not be included in this review document, as the facility's status with respect to these regulations will not change as part of this renewal without modification.

The permit will be updated to reflect the most current stipulations and shell guidance language for all applicable regulations.

- 15A NCAC 2D .0504, Particulates from Wood Burning Indirect Heat Exchangers – The four firetube design wood fuel-fired boilers (**ID Nos. ES-320, ES-321, ES-721, and ES-722**) at the facility are subject to 2D .0504. No changes are necessary under this permit renewal. It should be noted that boilers were previously permitted to burn both coal and wood. Under permit application 1400007.09A, Bernhardt requested that the permit be modified to no longer allow coal to be burned in any boiler at the facility. This change was incorporated into Air Permit No. 02000T25, issued on September 29, 2009.

Boiler Stack Tests:

The facility recently completed a re-build and modernization of the boilers at Plant 3. Boiler 321 was tested on July 8, 2015. Boiler 320 was tested on July 9, 2015. Stack testing of these boilers was not required in the current air permit. But, the facility wished to go ahead and test the boilers because of the re-builds. Bernhardt submitted a protocol to DAQ on May 5, 2015 for the tests and received an approval letter, dated June 17, 2015 (see file). The facility had hoped to have an O₂ monitoring system installed as part of the rebuild before the stack test. The multicyclones on both boilers were replaced with functionally equivalent units as part of the boiler rebuilds. Boiler 320 tested at a rate of 0.305 pounds (lb) per million Btu or lb/million Btu (limit of 0.55 lb/million Btu). Boiler 321 tested at a rate of 0.286 lb/million Btu (limit of 0.55 lb/million Btu). The stack test results were approved by Mrs. Shannon Vogel, RCO Stationary Source Compliance Branch (SSCB) in a 12/17/2015 memo (see file).

✓ Hence, compliance has been demonstrated.

- 15A NCAC 2D .0512, Particulates from Miscellaneous Wood Products Finishing Plants – The wood working operations (**ID Nos. ES-WDSP-3 and ES-WDSP-7**) and the wood furniture finishing operations (**ID Nos. ES-SBP-3 and ES-SBP-7**) are subject to 2D .0512.

Bernhardt will comply with this regulation by providing and maintaining adequate ductwork and collectors on the woodworking and finishing operations and associated controls as described in their permit.

- ✓ Based on the last inspection, this facility was noted to be in compliance with this regulation for the 02D .0512 affected sources listed above.
- 15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes – The fly ash separator (**ID No. ES-322**) is the only source subject to 02D .0515. No changes are necessary under this permit renewal.
 - ✓ Based on the last inspection report, this facility was deemed in compliance; thus, compliance with the 2D .0515 particulates rule is expected.
- 15A NCAC 2D .0516, Sulfur Dioxide from Combustion Sources – The only sources of combustion at the facility are four wood-fired boilers (**ID Nos. ES-320, ES-321, ES-721, and ES-722**). No monitoring, recordkeeping, or reporting requirements are necessary for sulfur dioxide emissions from wood fuel combustion.
 - ✓ Based on the last inspection report, this facility was deemed in compliance; thus, compliance with the 2D .0516 sulfur dioxide rule is expected.
- 15A NCAC 2D .0521, Control of Visible Emissions – The following equipment was manufactured and operating as of July 1, 1971 and must not have visible emissions of more than 40 percent opacity when averaged over a six-minute period, except as specified in 15A NCAC 2D .0521(c):
 - Wood fired-boilers (**ID Nos. ES-320, ES-321, ES-721, and ES-722**) and associated controls.
 - Wood working operations (**ID Nos. ES-WDSP-3 and ES-WDSP-7**) and associated controls.
 - Spray booths (**ID Nos. ES-SBP-3-326 through ES-SBP-3-342, and ES-SBP-7-730 through ES-SBP-7-740**).
 - Fly ash separator (**ID No. ES-322**).

The following equipment was manufactured after July 1, 1971 and must not have visible emissions of more than 20 percent opacity when averaged over a six-minute period, except as specified in 15A NCAC 2D .0521(d).

- Spray booths (**ID Nos. ES-SBP-7-741, ES-SBP-7-742, and ES-SBP-7-725 through ES-SBP-7-729**)

The remaining equipment associated with the wood furniture finishing operations (e.g., ovens, roll coaters, etc.) is expected to be in compliance with 2D .0521. No monitoring, recordkeeping, or reporting under this rule is required for these sources.

Bernhardt will comply with this regulation by performing visible emissions (VE) observations on the boilers, woodworking and finishing operations and associated controls as described in their permit.

- ✓ Based on the last inspection, this facility was noted to be in compliance with the VE regulation for the 02D .0521 affected sources listed above with VE readings ranging from 0%, 10%, 10 – 15% (for woodworking and finishing operations) and 10 – 40% (for the wood-fired boilers).
- 15A NCAC 2D .1109, Case-by-Case MACT – The requirements for Case-by-Case MACT for the boilers (**ID Nos. ES-320, ES-321, ES-721, and ES-722**) was removed per the facility's request along with minor HAP limits to avoid any future MACTs upon issuance of Air Quality Permit 02000T30. Thus, they are subject to the area source GACT for the boiler MACT, Subpart JJJJJ (See below).
- ✓ Bernhardt requested a HAP minor limit in order to avoid the Case-by-Case MACT, which was removed from the permit during a previous modification (issued Permit No. 02000T30). This changed Bernhardt's status from a Major source to Minor source for HAPs; thus, no longer subject to 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" and Subpart A "General Provisions." These boilers are now subject to the NESHAP for Area Sources: Industrial, Commercial, and Institutional Boilers (40 CFR Part 63 Subpart JJJJJ).
- 15A NCAC 2D .1111, Maximum Achievable Control Technology (MACT) – The facility is subject to the following MACTs:
 - Wood Finishing Operations (**ID Nos. ES-SBP-3 and ES-SBP-7**) – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Furniture Manufacturing Operations (40 CFR Part 63 Subpart JJ).
 - Dry kilns (**ID No. ES-DK-3**) – NESHAP for Ply wood and Composite Wood Products (40 CFR Part 63 Subpart DDDD).
 - Wood-fired Boilers (**ID Nos. ES-320, ES-321, ES-721, and ES-722**) – NESHAP for Area Source: Industrial, Commercial, and Institutional Boilers (40 CFR Part 63 Subpart JJJJJ).
- ❖ More discussion on the three subject MACTs provided under Section 6 below.
- 15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions – This condition is applicable facility-wide.
 - ✓ Based on the last inspection report, this facility was deemed in compliance; thus, compliance with the odor rule is expected.
- 15A NCAC 2Q .0317 Avoidance Conditions – Limitation to Avoid being Major for Hazardous Air Pollutants (HAP) – The facility requested limits be placed in their permit for HAPs of less than 10 tons per year (tpy) and less than 25 tpy of any combination of HAPs or total HAPs as part of Application No. 6200015.13A for issued Air Quality Permit 02000T30.
 - ❖ This condition is applicable facility-wide.

- ✓ Based on the last inspection report, this facility was deemed in compliance; thus, compliance with the HAP avoidance rule is expected.

6. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS

The facility is not currently subject to any New Source Performance Standards.

This permit renewal does not affect this status.

NESHAPS/MACT

Bernhardt is currently subject to the following three MACTs:

- ✓ MACT JJ

As noted previously, the facility is subject to MACT JJ. On November 21, 2011, the EPA promulgated the Residual Risk and Technology Review (RRTR) for MACT JJ. The RRTR amended MACT JJ to prohibit conventional spray guns and to limit emissions of formaldehyde from facilities to 400 pounds per 12-month period. These amendments were incorporated into Permit Condition 2.2-A for the MACT JJ sources.

- ✓ MACT DDDD

The dry kilns at Plant 3 (ID No. ES-DK-3) are subject to 40 CFR 63 Subpart DDDD (MACT 4D), Plywood and Composite Wood Products Manufacturing. The only requirement for the kilns under MACT 4D is submittal of an initial notification.

- ✓ GACT JJJJJ

The facility became subject to GACT 6J during issuance of Air Permit No. 02000T30. The GACT requirements were placed in the permit at that time. Since that time the facility has conducted boiler rebuilds on ES-320 and ES-321 in which they installed an oxygen trim system. This was addressed during the previous modification (issued Air Quality Permit No. 02000T31). At that time MACT language was placed in the permit. However, since that time standard MACT JJJJJ language has been received from Mr. Voelker, DAQ-RCO, which will replace parts of the language previously placed in Bernhardt's revised Air Permit No. 02000T31 for consistency.

This permit renewal does not affect MACT status.

PSD

Caldwell County is designated as in attainment. Bernhardt is classified as a Major source for PSD purposes, based on the potential emissions of VOC from the facility.

This permit renewal does not affect the PSD status of the facility.

Attainment

The minor source baseline dates have NOT been triggered for any criteria pollutants in Caldwell County (NO_x, PM₁₀ or SO₂).

Hence, this permit renewal does not consume or expand increments for any pollutants.

112(r)

The facility is not subject to Section 112(r) of the Federal Clean Air Act requirements because per Form A3 – 112(r) Applicability Information Bernhardt does not store any of the regulated substances in quantities above the threshold values in 112(r).

This permit renewal does not affect the 112(r) status of the facility.

CAM

40 CFR Part 64 is applicable to any pollutant-specific emission unit, if the following three conditions are met:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- the unit's precontrol potential emission rate exceeds either 100 tons/yr (for criteria pollutants) or 10/25 tons/yr (for HAPs).

The facility uses cyclones and bagfilters to control emissions of particulate matter (PM) and PM with an aerodynamic diameter less than or equal 10 micrometers (PM10) from its woodworking operations (ID Nos. ES-WDSP-3 and ES-WDSP-7).

Per Form E6 – Compliance Assurance Monitoring (CAM) Plan [E6-1] submitted as part of the renewal application, Bernhardt does not have any emission units with an emission potential greater than 100 tons per year; therefore, CAM does not apply. Also, as detailed in the review for Bernhardt's previous renewal:

- ✓ The wood working operations and the fly ash separator have maximum potential pre-controlled emissions of less than 100 tons per year.

Per the review for issued permit No. 02000T29, as shown in the table below, the maximum potential pre-control PM10 emissions to these control devices are well below the 100 tons per year (tpy) limit for criteria pollutants.

Emission Source ID	Actual Board Feet (2005) @ 2000 hours	Potential Board Feet @ 8760 hours	PM10 Emissions (tpy)			PM10 Total Emissions (tpy)
			Rough End Loss	Machine Room Loss	Sanding Loss	
ES-EDSP-3 (wood)	66,377	290,731	0.04	0.38	6.05	6.47
ES-EDSP-3 (particle Board)	951,425	4,167,242	0.15	1.39	19.84	21.37
Total from ES-EDSP-3						27.84
ES-EDSP-7 (wood)	93,544	409,723	0.05	0.53	8.53	9.12

The only other emission source with a control device is the fly ash separator (ID Nos. ES-322). The fly ash separator is described as a 55-gallon barrel with a HEPA filter on its vent. Particulate matter emissions collected by the multicyclones on boilers ID Nos. ES-320 and ES-321 are blown to the fly ash separator. A HEPA filter with a removal efficiency of 99.9% controls PM emissions that are vented from the fly ash separator during the multicyclone blow down. The maximum potential pre-control emission to the HEPA filter is unknown, but as worse case, it can be assumed to be the maximum potential PM10 that is removed by the multicyclones and sent to the fly ash separator. As shown in the table below, the maximum amount of PM10 sent to the fly ash separator is 11.3 tons. Therefore, the potential maximum pre-control PM10 emissions to the HEPA filter are well below the 100 tons/yr limit.

Emission Source	Total Heat Input to the Boilers (million Btu/hr)	Uncontrolled PM10 Emissions (tpy)	Controlled PM10 Emissions (tpy)	PM10 Removed by Multicyclones (tpy)
ES-320 and ES-321	28.6	47.2	36.0	11.3
<u>Notes:</u> Emissions were calculated using NC DAQ's "Woodwaste Combustion Emissions Calculator Regions J" (07/15/11). The NC DAQ's spreadsheet assumes a collection efficiency from the multicyclones of 23.9%. Emissions were calculated assuming both boilers are operating 8760 hours per year.				

As shown above the wood working operations and the fly ash separator have maximum potential pre-control emissions of less than 100 tons per year.

The other emission sources at the facility either have no control devices or are subject to a Section 112 standard promulgated after November 15, 2009. Therefore, CAM is not applicable to this facility.

7. Facility Wide Air Toxics

Bernhardt's primary operations are wood furniture manufacturing and combustion sources, which are exempt from toxics per:

15A NCAC 02Q .0702 EXEMPTIONS

(a) A permit to emit toxic air pollutants shall not be required under this Section for:

...

(18) combustion sources as defined in Rule .0703 of this Section except new or modified combustion sources permitted on or after July 10, 2010;

...

(23) wood furniture manufacturing operations as defined in 40 CFR 63.801(a) that comply with the emission limitations and other requirements of 40 CFR Part 63 Subpart JJ, provided that the terms of this exclusion shall not affect the authority of the Director under Rule .0712 of this Section; ...

In addition, per new guidance toxics shall not apply to the following emission sources:

- SESSION LAW 2012-91 – HOUSE BILL 952:

G.S. 143-215.107(a)(5) – The Department shall implement rules adopted pursuant to this subsection as follows:

a. Except as provided in sub-subdivision b. of this subdivision, rules adopted pursuant to this subdivision that control emissions of toxic air pollutants shall not apply to an air emission source that is any of the following:

1. Subject to an applicable requirement under 40 C.F.R. Part 61, as amended.
2. An affected source under 40 C.F.R. Part 63, as amended.
3. Subject to a case-by-case maximum achievable control technology (MACT) permit requirement issued by the Department pursuant to 42 U.S.C. § 7412(j), as amended.

b. Upon receipt of a permit application for a new source or facility, or for the modification of an existing source or facility, ...

➤ This is for a renewal; thus, paragraph b above does not apply.

However, 02Q .0702 Exemptions was amended May 1, 2014 to incorporate Session Law 2012-91 – House Bill 952 into NCAC. Thus, per 02Q .0702(a):

(27) an air emission source that is any of the following:

- (A) subject to an applicable requirement under 40 CFR Part 61, as amended;
- (B) an affected source under 40 CFR Part 63, as amended; or
- (C) subject to a case-by-case MACT permit requirement issued by the Division pursuant to Paragraph (j) of 42 U.S.C. Section 7412, as amended;

...

Therefore, all combustion sources or sources subject to a MACT standard at Bernhardt are exempt from toxics per 02Q .0702.

✓ The only emission sources at the Bernhardt facility that are not subject to MACT or 112(j) are the woodworking operations (**ID Nos. ES-WDSP-3 and ES-WDSP-7**) and the fly ash separator (**ID No. ES-322**), which are not subject to toxics.

❖ 02Q .0705, “Existing Facilities and SIC Calls,” was repealed; thus, it will be removed during this permit renewal.

8. Compliance Status [Refer to latest inspection report for more details]

DAQ has reviewed the compliance status of this facility. During the most recent inspection, conducted on May 24, 2016 by Mr. Patrick Ballard of the ARO, the facility appeared to be in compliance with their current air permit (Air Quality Permit No. 02000T30).

Per latest inspection report, on May 24, 2016 Mr. Richard Morris and Mr. Patrick Ballard of the Asheville Regional Office (ARO) met with Mr. Eddie Pitts of Bernhardt to inspect Plants 3 & 7. This complex formerly consisted of plants 1, 3 and 7. Plant 3 manufactures office furniture such

as desks and shelves. Plant 7 manufactures office chairs. Plant 1 has been sold and has been re-permitted as Minton Ventures, LLC, Site Number: 01/14/00203. The complex has a steam line from Plant 3 to Plant 7 such that the boilers from Plant 3 serve Plant 7. The Plant 7 boilers are rarely used. All the boilers at this complex are fire tube. Coal was dropped as a fuel in the boilers in 2009. Permit revision 02000T30 reclassified the facility as HAPs Minor. The case-by-case MACT conditions to the boilers were replaced with the Boiler GACT Subpart 6J requirements.

2. Facility Compliance History:

Inspection/ Test DATE	Notice of Violation DATE	Description of violation(s)
08/29/2014	09/05/2014	NOV issued for lack of recordkeeping on the bagfilter exhaust observations at Plant 7.
	07/21/2010	NOV/NRE issued for late submittal of emissions inventory.
02/06/2007	02/20/2007	NOV - MACT, Subpart JJ - Operation of spray guns at a pressure greater than 10 psi.
	08/26/2005	NOV/NRE for late submittal of the July 2005 semi-annual MACT and TV compliance reports.

3. **Annual Inspection Observations - Plant 3:**

Woodworking / Boilers

Observations of the woodworking operations and boilers during the inspection are summarized in the following table.

<u>Equipment</u>	<u>Comment</u>
Boiler ES-320 (called Boiler 2 by the facility, the boiler closest to the road)	This boiler was in operation at 70.2 psi steam. Visible emissions were variable and ranged from 10% to 40%. However, a good sun angle and a good background are difficult to view for this boiler. Stack temperature was 400F and the feed rate was approximately 33%. The multicyclone on this boiler does not have a rotary valve but operates an injection fan. The boiler flyash is blown to a bin instead of being augured. Boiler plate info. - 1966 Bigelow. Firetube boiler.
Boiler ES-321 (called Boiler 1 by the facility, the boiler furthest from the road)	This boiler was not in operation on this date. The multicyclone on this boiler does not have a rotary valve but operates an injection fan. The boiler flyash is blown to a bin instead of being augured. Boiler plate info. - 1957 Bigelow. Firetube boiler.
Flyash separator ES-322 with HEPA filter CD- 322	The flyash separator was in operation with no visible emissions. This system is simply a 55-gallon drum with an inlet pipe and a filter on the exhaust. Located on the ground to the side of the boiler house.
Cyclone CD-301	Cyclone installed on Hog, not operating during inspection. Located above the dust bin.
Cyclone CD-303	Not listed on the permit and not used. Located on the ground in front of the building.

<u>Equipment</u>	<u>Comment</u>
Cyclone CD-305	Relay cyclone not vented to atmosphere. Not listed on the permit. Located above the dust bin.
Cyclone CD-306	Relay cyclone not vented to atmosphere. Not listed on the permit. Located above the dust bin.
Cyclone CD-307	This cyclone has been removed.
Bagfilter CD-311	Operating, venting to atmosphere with no visible emissions. Located on the ground in front of the building.
Bagfilter CD-312	Operating, venting to atmosphere with no visible emissions. Located on the ground in front of the building.
Bagfilter CD-313	Operating, venting to atmosphere with no visible emissions. Located on the ground on the side of the building. This is a recent like-for-like replacement because the old bagfilter was damaged by fire.
Bagfilter CD-317	Operating, venting to atmosphere with no visible emissions. Located on the ground on the side of the building.
Dry Kilns ES-DK3	Five dry kilns on site with an approximate capacity of 230-270 million bd ft (2005 inspection report). Not operating during inspection and typically not used.

No leaks were observed in the boiler ductwork or control equipment. Two minor dust leaks were observed in the woodworking duct work. These were pointed out to the facility and they said the leaks would be fixed. The inspection and maintenance records and Title V monitoring requirements were observed and appeared adequate (see Section 6 of this report). The last documented annual internal inspections of the bag filters were on June 19 and 20, 2015.

The multicyclones on both boilers were replaced with functionally equivalent units as part of the boiler rebuilds. Multicyclone CD-320 was replaced in May 2015. Multicyclone CD-321 was replaced in October/November 2014. The last annual inspections of the multicyclones was on March 3, 2016.

The HEPA filter CD-322 is a simple filter on the outlet of a 55-gallon flyash collection barrel. The permit calls for weekly filters inspections, annual internal inspections and monthly VE observations. Because of the simplicity of the system, these weekly visual inspections serve as compliance for the other inspection requirements. The filter for the system is clearly visible from the outside. The last documented filter replacement was on November 4, 2015. Although, maintenance personnel stated that they changed the filter in early May 2016 but forgot to write it down.

The complex has a steam line from Plant 3 to Plant 7 such that the boilers from Plant 3 serve Plant 7. There is an uncontrolled wood dust bin used to provide wood for the boilers (located next to the boiler house of Plant 3). Vents on the top of this bin have been observed with 10-15% opacity in the past. Visible emissions of approximately 10% were observed from the wood fuel bin during this inspection.

Plant 3 has installed an “EcoGate” computer control system of the facility’s woodworking duct work. This allows the baghouse fan speed to be adjusted to match demand. That is, if most equipment is idle, fan speed will be lower.

Boiler Stack Tests:

The facility recently completed a re-build and modernization of the boilers at Plant 3. Boiler 321 (the boiler furthest from the road) was tested on July 8, 2015. Boiler 320 (the boiler closest to the road) was tested on July 9, 2015. Stack testing of these boilers was not required in the current air permit. But, the facility wished to go ahead and test the boilers because of the re-builds. They submitted a protocol to DAQ on May 5, 2015 for the tests and received an approval letter, dated June 17, 2015 (see file). The facility had hoped to have an O₂ monitoring system installed as part of the rebuild before the stack test. The multicyclones on both boilers were replaced with functionally equivalent units as part of the boiler rebuilds. Boiler 320 tested at a rate of 0.305 lb/mmbtu (limit of 0.55 lb/mmbtu). Boiler 321 tested at a rate of 0.286 lb/mmbtu (limit of 0.55 lb/mmbtu). The stack test results were approved by Shannon Vogel in a 12/17/2015 memo (see file).

Boiler GACT, Subpart JJJJJ

This facility is now classified as HAPs Minor and as a result, is subject to the Boiler GACT, Subpart JJJJJ. Initial boiler tune ups were due by March 21, 2014 and then every two years thereafter. A one-time energy assessment was due by March 21, 2014. The initial boiler tune-ups were conducted on February 19 and 20, 2014. Boiler tune-ups were again conducted on May 21 and 22, 2015 as part of the Plant 3 boiler rebuilds (see facility file). The energy assessment was conducted on May 16 and August 20, 2013 (see facility file).

Facility Compliance History:

Inspection or Test DATE	Notice of Violation DATE	Description of violation(s)
08/29/2014	09/05/2014	NOV issued for lack of recordkeeping on the bagfilter exhaust observations at Plant 7.
	07/21/2010	NOV/NRE issued for late submittal of emissions inventory.
02/06/2007	02/20/2007	NOV - MACT, Subpart JJ - Operation of spray guns at a pressure greater than 10 psi.
	08/26/2005	NOV/NRE for late submittal of the July 2005 semi-annual MACT and TV compliance reports.

Additionally, a signed Title V Compliance Certification (Form E5) indicating that the facility was in compliance with all applicable requirements was included with the permit application.

9. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 2Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. The states of Tennessee and Virginia as well as the Western North Carolina Regional Air Quality Agency and Mecklenburg County Department of Environmental Protection are all affected areas within 50 miles of this facility and will be notified accordingly.

Public Notice of the DRAFT Title V Permit ran from July XX, 2017 to XXXX, 2017.

Comments Received on the Draft Permit – No public comments received to date.

EPA's 45 Day Review period ran concurrent with the 30 day Public Notice from July XX, 2017 to XXXX, 2017.

No comments were received from EPA, U. S. EPA, Region 4, regarding the Draft Permit.

10. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.

11. Recommendations

The permit application for Bernhardt Furniture Company – Plants 3 & 7 located in Lenoir, Caldwell County, NC has been reviewed by NC DAQ to determine compliance with all procedures and requirements.

NC DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources.

A draft permit and review were sent to Mr. Patrick Ballard, DAQ – Asheville Regional Office (ARO) for review on June 30, 2017. Comments received on XXXX, 2017.

The NC DAQ-RCO along with DAQ-ARO recommends the issuance of Air Permit No. 02000T32.

Attachment 1 to Review for Air Quality Permit No. 02000T32



BUSINESS CORPORATION ANNUAL REPORT

NAME OF BUSINESS CORPORATION: Bernhardt Furniture Company

SECRETARY OF STATE ID NUMBER: 0012767 STATE OF FORMATION: NC

REPORT FOR THE FISCAL YEAR END: 12/31/2016

Filing Office Use Only
E-Filed Annual Report
0012767
CA201710301209
4/13/2017 10:06

☐ Changes

SECTION A: REGISTERED AGENT'S INFORMATION

1. NAME OF REGISTERED AGENT: Craymer, Peter W.

2. SIGNATURE OF THE NEW REGISTERED AGENT: _____

SIGNATURE CONSTITUTES CONSENT TO THE APPOINTMENT

3. REGISTERED OFFICE STREET ADDRESS & COUNTY

1839 Morganton Blvd SW

Lenoir, NC 28645-5338 Caldwell County

4. REGISTERED OFFICE MAILING ADDRESS

P.O. Box 740

Lenoir, NC 28645-0740

SECTION B: PRINCIPAL OFFICE INFORMATION

1. DESCRIPTION OF NATURE OF BUSINESS: Manufacturing

2. PRINCIPAL OFFICE PHONE NUMBER: (828) 759-6302

3. PRINCIPAL OFFICE EMAIL: Privacy Redaction

4. PRINCIPAL OFFICE STREET ADDRESS & COUNTY

1839 Morganton Blvd SW

Lenoir, NC 28645-5338

5. PRINCIPAL OFFICE MAILING ADDRESS

P.O. Box 740

Lenoir, NC 28645-0740

SECTION C: OFFICERS (Enter additional officers in Section E.)

NAME: James Rountree Collett Jr.

NAME: Peter W. Craymer

NAME: _____

TITLE: Chief Operating Officer

TITLE: Chief Financial Officer

TITLE: _____

ADDRESS: _____

ADDRESS: _____

ADDRESS: _____

P.O. Box 740

P.O. Box 740

Lenoir, NC 28645-0740

Lenoir, NC 28645-0740

SECTION D: CERTIFICATION OF ANNUAL REPORT. Section D must be completed in its entirety by a person/business entity.

James Rountree Collett Jr.

4/13/2017

SIGNATURE

DATE

Form must be signed by an officer listed under Section C of this form.

James Rountree Collett Jr.

Chief Operating Officer

Print or Type Name of Officer

Print or Type Title of Officer

This Annual Report has been filed electronically.

MAIL TO: Secretary of State, Corporations Division, Post Office Box 29525, Raleigh, NC 27626-0525